Kansas Department of Health and Environment
Bureau of Environmental Remediation, Remedial Section
Voluntary Cleanup Program

Atlas Powder

Background:
ICI Explosives (and its predecessors) operated an explosives storage facility from the early 1920s on leased property in Baxter Springs, Kansas. In the late 1970s, the site mixed ammonium nitrate and fuel (ANFO) for local distribution. These were the only bulk products handled at the site. At lease termination, ICI Explosives desired to implement an accelerated cleanup approach as an alternative to natural attenuation. A subsurface investigation was conducted and the vertical and horizontal extent of nitrate contamination was established based on 200 mg/kg.

Solution:
A Remedial Action Plan was submitted and approved by KDHE for excavation, off-site placement, verification sampling, and backfilling the area of concern. Excavation of contaminated material occurred in April 1999 with more than 5500 cubic yards of soil transported off-site. Before final verification sampling was conducted, KDHE issued a letter addressing concerns over the potential that "additional releases have occurred from past operation and/or chemical storage". To obtain regulatory oversight and written confirmation of remedial activities for the entire state, ICI explosives entered into the Voluntary Cleanup Program and Property Redevelopment Program in June 1999. KDHE implemented a sampling plan to obtain verification samples from the excavation and the remaining site.

Area void of vegetation, looking south.

Contaminants investigated included nitrate and total petroleum hydrocarbons (TPH) as diesel. Two bottom and four sidewall samples taken from the excavation ranged from 50 mg/kg to 310 mg/kg for nitrate and non-detect for TPH. Bases on these results, authorization was granted to backfill the excavation. Seven samples were taken from the remainder of the site that ranged from non detect to 13 mg/kg nitrate and non detect for TPH. No additional remedial activities were required for the site.

Three storage buildings associated with product storage were evaluated and demolished, with approved on-site burning of the combustible material. A groundwater well located on the site was sampled and, since no contamination was discovered, was properly closed. A No Further Action determination letter was issued based on successful cleanup of the property.

Completed excavation, May 1999

Benefits:

- **Approximately 5500 cubic yards of contaminated soil removed.**